

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A leukocyte stimulation matrix for the stimulation of leukocytes and/or the induction of an immunological tolerance having the following components:

- a) at least one carrier selected from the group consisting of polyamides, polyester, polystyrene, polyethylene, polypropylene, elastomers, polytetrafluoroethylene, polymethylpentane, dissolvable materials used in surgery, glass, biocompatible metals, metals covered with biocompatible materials, gut skins, and sponges.
- b) a soluble matrix comprising a compound selected from the group consisting of polyethylene glycol; a sugar compound selected from the group consisting of starch, cellulose, and glycogen; or a combination thereof for embedding at least one component for generating a leukocyte stimulation and/or the induction of an immunological tolerance,
- c) at least one component embedded into the soluble matrix for generating a leukocyte stimulation and/or the induction of an immunological tolerance, wherein the at least one component embedded into the soluble matrix is selected from the group consisting of antigens, MHC molecules, co-stimulatory factors, cell components, cell coatings, bacteria, viruses and combinations thereof; and
- d) at least one coupling component for mediating the binding between the carrier and the at least one component for generating a leukocyte stimulation and/or the

induction of an immunological tolerance, wherein the at least one coupling component is selected from the group consisting of cyanogen bromide, cyanoboro hydride, agarose, agarose derivatives, silane, silane derivatives, and a combination thereof.

2. CANCELED

3. (Previously Presented) The leukocyte stimulation matrix according to claim 1, wherein the binding is a covalent binding.

4. CANCELLED

5. (Previously Presented) The leukocyte stimulation matrix according to claim 1, wherein the at least one component for generating a leukocyte stimulation and/or the induction of an immunological tolerance is a synthetic antigen or is obtained from viruses, bacteria, fungi, tumours, allergens, endogenous tissue, and/or the MHC molecule; and

the co-stimulatory factors are obtained from endogenous tissue, cell cultures and/or synthetically.

6. (Previously Presented) The leukocyte stimulation matrix according to claim 1, wherein the at least one component for generating a leukocyte stimulation and/or the induction of an immunological tolerance is a virus of the family of herpes viruses or a fragment thereof.

7. CANCELED

8. CANCELED

9. (Currently Amended) The leukocyte stimulation matrix according to claim [[8]] 1, wherein the silane derivative is an alkoxy silane.

10. CANCELED

11. (Currently Amended) The leukocyte stimulation matrix according to claim [[10]] 1, wherein the soluble matrix is made of 50-90 wt.% of a sugar compound selected from the group consisting of starch, cellulose, and glycogen; and 10-50 wt.% of polyethylene glycol, based on the total of long-chain sugar compound and polyethylene glycol.

12. (Previously Presented) The leukocyte stimulation module comprising a housing with at least one opening and a leukocyte stimulation matrix according to claim 1.

13. (Previously Presented) The leukocyte stimulation module according to claim 12 comprising at least one inlet opening and at least one outlet opening.

14. (Withdrawn) A process for the stimulation of leukocytes and/or the induction of an immunological tolerance wherein a leukocyte containing liquid is contacted with a leukocyte stimulation matrix according to claim 1.

15. (Withdrawn) A process according to claim 14, wherein the contacting is carried out in a leukocyte stimulation module according to claim 12.

16. CANCELED

17. CANCELED

18. (Previously Presented) The leukocyte stimulation matrix according to claim 6, wherein the at least one component for generating a leukocyte stimulation and/or the induction of an immunological tolerance is a cytomegalo virus or a fragment thereof.

19. (Currently Amended) The leukocyte stimulation matrix according to claim [[7]] 1, wherein the natural material carrier is [[a]] gut [[skin]] skins.

20. (Currently Amended) The leukocyte stimulation matrix according to claim [[7]] 1, wherein the biological material carrier is a sponge.

21. (Previously Presented) The leukocyte stimulation matrix according to claim 9, wherein the alkoxy silane is at least one of an anhydroalkoxy silane and another alkoxy silane comprising at least one carboxyl group.

22. (Previously Presented) The leukocyte stimulation matrix according to claim 11, wherein the soluble matrix is made of 60-80 wt.% of a sugar compound selected from the group consisting of starch, cellulose, and glycogen; and 20-40 wt.% of a polyethylene glycol, based on the total of long chain sugar compound and polyethylene glycol.

23. (Previously Presented) The leukocyte stimulation module according to claim 13, comprising one inlet opening and one outlet opening.

24. (Withdrawn) A method for the stimulation of leukocytes and/or the induction of an immunological tolerance comprising providing a leukocyte stimulation matrix according to claim 1.

25. (Withdrawn) A method for detecting distribution of activated T-cell subtypes or for vaccinations comprising providing a leukocyte stimulation matrix according to claim 1.